Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for accessing memory, comprising:

generating a block index for a block of data;

mapping the block index to a physical address of a memory based on the block index and a number N, wherein N is bank number of the memory;

storing the block of data into the memory at the physical address; and

looping to the generating step,

wherein the mapping step makes each one of the block indexes at all times map in turns to one physical address located at different unconnected banks, and result in any logical adjacent block of data be stored physically at different unconnected banks of the memory.

2. (original) The method of claim 1, wherein the memory supports pipelining access.

3. (original) The method of claim 1, wherein the memory is a SDRAM.

4. (original) The method of claim 1, the mapping steps further comprises:

dividing the block index by N to obtain a quotient Q and a remainder R; and

calculating the physical address based on Q and R, wherein the physical address=Q*block_size+R*bank_size.

5. (previously presented) The method of claim 4, wherein bank_size equals the memory size divided by N, and block_size equals the size of which the system is in need to process one sector from an optical disc.

6. (currently amended) A method of operating a disc player with a memory comprising:

retrieving a block of data from a source media;

assigning a block index for the block of data;

dividing value of the block index by N for acquiring a quotient Q and a reminder R, wherein N is bank number of the memory;

calculating the physical address based on Q and R;

storing the block of data in the memory at the physical address; and

repeating form the retrieving step, wherein the calculating step makes the block index interleaved at all times mapping to a physical address located at different unconnected banks and any two logically successive blocks of data be stored physically at different unconnected banks of the memory.

7. (original) The method of claim 6, wherein the memory supports pipelining access.

8. (original) The method of claim 6, wherein the memory is a SDRAM.

9. (original) The method of claim 6, wherein the calculating step further comprises a reference function, as follows:

the physical address=Q*block_size+R*bank_- size.

10. (original) The method of claim 9, wherein bank_size equals the memory size divided by N, and block_size is bank_size divided into a plurality of parts.

11. (original) The method of claim 9, further comprises:

reading the block of data according to the block index and the reference function; and

recording the block of data to a destination media, whereby the reading step makes each one of the block of data read at different banks in turns and result in time saving and reduces pre-charge overloads by reading in one bank and pre-charge in another bank accessed just before.

12. (currently amended) An apparatus for operating a disc player with a memory, comprising:

means for retrieving a block of data from a disc;

means for generating a block index for the block of data;

means for dividing value of the block index by N for acquiring a quotient Q and a reminder R, wherein N is bank number of the

memory; and

means for calculating the physical address based on Q and R, wherein the calculating means makes the block index interleaved at all times mapping to the physical address located at different unconnected banks and any two logically successive blocks of data be stored physically at different unconnected banks of the memory.

13. (original) The apparatus of claim 12, wherein the memory supports pipelining access.

14. (original) The apparatus of claim 12, wherein the memory is a SDRAM.

15. (original) The apparatus of claim 12, wherein the means for calculating implements a reference function as follow:

the physical address=Q*block_size+R*bank_size.

16. (original) The apparatus of claim 15, wherein bank_size equals the memory size divided by N, and block_size is bank_size divided into a plurality of parts.

17. (currently amended) A method for accessing memory, comprising:

generating a plurality of block indexes for a plurality of blocks of data;

mapping the block indexes sequentially to a plurality of physical address of a memory based on the block indexes and a number N,

wherein N is bank number of the memory; and

storing the block of data into the memory at the physical address, wherein the mapping step makes each one of the block indexes at all times map in turns to one physical address located at different unconnected banks, and result in any logical adjacent block of data be stored physically at different unconnected banks of the memory.

18. (original) The method of claim 17, wherein the memory supports pipelining access.

19. (original) The method of claim 17, wherein the memory is a SDRAM.

20. (previously presented) The method of claim 17, the mapping steps further comprises:

dividing the block index by N to obtain a quotient Q and a remainder R; and

calculating the physical address based on Q and R, wherein the physical address=Q*block_size+R*bank_size, bank_size equals the memory size divided by N, and block_size equals the size of a plurality of sectors on an optical disc.